

## What is Claimed Is:

- [c1] 1.A method for parsing multiple-frame protocol messages, comprising the steps of:
- receiving a frame of data from a remote ATU, wherein the frame of data contains a segment of a multi-frame protocol message;
  - inserting the information contained within the received frame into a data buffer;
  - determining whether the data in the data buffer constitutes a complete message;
  - sending a continuation message to the remote ATU if it is determined that the data in the data buffer does not constitute a complete message; and
  - extracting the complete message from the data buffer if it is determined that the data in the data buffer does constitute a complete message.
- [c2] 2.The method of claim 1, further comprising the steps of:
- receiving a next message frame from the remote ATU sent in response to the continuation message;
  - concatenating the information contained within the next message frame onto the data within the data buffer;
  - determining whether the concatenated data in the data buffer constitutes a complete message;
  - sending a continuation message to the remote ATU if it is determined that the concatenated data in the data buffer does not constitute a complete message; and
  - extracting the complete message from the data buffer if it is determined that the concatenated data in the data buffer does constitute a complete message.
- [c3] 3.The method of claim 1, wherein the step of determining whether the data in the data buffer constitutes a complete message, further comprises the steps of:
- counting a number of parameter and subparameter bits within the data buffer;
  - and
  - matching the number of parameter and subparameter bits to a number of delimiting bits contained within the data buffer.
- [c4] 4.The method of claim 1, wherein the step of determining whether the data in

the data buffer constitutes a complete message, further comprises the step of parsing the data buffer to determine its completeness.

[c5] 5.The method of claim 1, wherein the step of extracting the complete message from the data buffer, further comprises the step of parsing the data buffer.

[c6] 6.A system for parsing multiple-frame protocol messages, comprising:  
means for receiving a frame of data from a remote ATU, wherein the frame of data contains a segment of a multi-frame protocol message;  
means for inserting the information contained within the received frame into a data buffer;  
means for determining whether the data in the data buffer constitutes a complete message;  
means for sending a continuation message to the remote ATU if it is determined that the data in the data buffer does not constitute a complete message; and  
means for extracting the complete message from the data buffer if it is determined that the data in the data buffer does constitute a complete message.

[c7] 7.The system of claim 6, further comprising:  
means for receiving a next message frame from the remote ATU sent in response to the continuation message;  
means for concatenating the information contained within the next message frame onto the data within the data buffer;  
means for determining whether the concatenated data in the data buffer constitutes a complete message;  
means for sending a continuation message to the remote ATU if it is determined that the concatenated data in the data buffer does not constitute a complete message; and  
means for extracting the complete message from the data buffer if it is determined that the concatenated data in the data buffer does constitute a complete message.

[c8] 8.The system of claim 6, wherein the means for determining whether the data in the data buffer constitutes a complete message, further comprise:

means for counting a number of parameter and subparameter bits within the data buffer; and

means for matching the number of parameter and subparameter bits to a number of delimiting bits contained within the data buffer.

[c9] 9.The system of claim 6, wherein the means for determining whether the data in the data buffer constitutes a complete message, further comprise means for parsing the data buffer to determine its completeness.

[c10] 10.The system of claim 6, wherein the means for extracting the complete message from the data buffer, further comprise means for parsing the data buffer.

[c11] 11.A computer readable medium incorporating instructions for parsing multiple-frame protocol messages, the instructions comprising:  
one or more instructions for receiving a frame of data from a remote ATU, wherein the frame of data contains a segment of a multi-frame protocol message;  
one or more instructions for inserting the information contained within the received frame into a data buffer;  
one or more instructions for determining whether the data in the data buffer constitutes a complete message;  
one or more instructions for sending a continuation message to the remote ATU if it is determined that the data in the data buffer does not constitute a complete message; and  
one or more instructions for extracting the complete message from the data buffer if it is determined that the data in the data buffer does constitute a complete message.

[c12] 12.The computer readable medium of claim 11, the instructions further comprising:  
one or more instructions for receiving a next message frame from the remote ATU sent in response to the continuation message;  
one or more instructions for concatenating the information contained within the next message frame onto the data within the data buffer;

one or more instructions for determining whether the concatenated data in the data buffer constitutes a complete message;  
one or more instructions for sending a continuation message to the remote ATU if it is determined that the concatenated data in the data buffer does not constitute a complete message; and  
one or more instructions for extracting the complete message from the data buffer if it is determined that the concatenated data in the data buffer does constitute a complete message.

[c13] 13.The computer readable medium of claim 11, wherein the one or more instructions for determining whether the data in the data buffer constitutes a complete message, further comprise:  
one or more instructions for counting a number of parameter and subparameter bits within the data buffer; and  
one or more instructions for matching the number of parameter and subparameter bits to a number of delimiting bits contained within the data buffer.

[c14] 14.The computer readable medium of claim 11, wherein the one or more instructions for determining whether the data in the data buffer constitutes a complete message, further comprise one or more instructions for parsing the data buffer to determine its completeness.

[c15] 15.The computer readable medium of claim 11, wherein the one or more instructions for extracting the complete message from the data buffer, further comprise one or more instructions for parsing the data buffer.